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March 22, 2006

Via Federal Express

Ms. Elizabeth O'Donnell
Executive Director
Public Service Commission
211 Sower Boulevard, P.O. Box 615
Frankfort, Kentucky 40602-0615

RECEIVED

MAR 23 2006

PUBLIC SERVICE
COMMISSION

Re: **KENERGY CORP.**
PSC Administrative Case No. 2006-00045

Dear Ms. O'Donnell:

Enclosed are an original and seven copies of the response of Kenergy Corp. to the data requests propounded to it in the February 24, 2006, order of the Public Service Commission in the above-styled matter. Please note our appearance as counsel of record for Kenergy Corp. I certify that a copy of this filing has been served this day on the persons shown on the attached service list.

Sincerely yours,



James M. Miller
Tyson Kamuf
Counsel for Kenergy Corp.

JMM/ej
Enclosures

cc: Mark A. Bailey
Frank N. King, Jr., Esq.
Service List

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PSC CASE NO. 2006-00045**

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Director-State Regulation and Rates
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Paintsville, KY 41240-1422

**COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION**

RECEIVED

MAR 23 2006

PUBLIC SERVICE
COMMISSION

In the Matter of:

**CONSIDERATION OF THE REQUIREMENTS)
OF THE FEDERAL ENERGY POLICY ACT OF)
2005 REGARDING TIME-BASED METERING,)
DEMAND RESPONSE, AND INTERCONNECTION)
SERVICE)**

**CASE NO.
2006-00045**

**KENERGY CORP'S
RESPONSE TO THE INITIAL DATA REQUESTS CONTAINED
IN APPENDIX C TO THE PUBLIC SERVICE COMMISSION'S
ORDER DATED FEBRUARY 24, 2006**

March 23, 2006

KENERGY CORP'S
RESPONSE TO THE INITIAL DATA REQUESTS CONTAINED IN APPENDIX C
TO THE PUBLIC SERVICE COMMISSION'S ORDER
DATED FEBRUARY 24, 2006

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4 Kenergy Corp. ("Kenergy") offers the following comments, observations and
5 responses to the Public Service Commission's ("Commission") Order dated February
6 24, 2006 in Case No. 2006-00045, *Consideration Of The Requirements Of The Federal*
7 *Energy Policy Act Of 2005 Regarding Time-Based Metering, Demand Response And*
8 *Interconnection Service.*

9
10 Kenergy is a rural electric distribution cooperative, and is a member-owner of Big
11 Rivers Electric Corporation ("Big Rivers"). Big Rivers is a rural electric generation
12 and transmission cooperative ("G&T"), which owns generating assets, and purchases,
13 transmits and sells electricity at wholesale. Its principal purpose is to provide the
14 wholesale electricity requirements of its three distribution cooperative members
15 ("Members"): Kenergy, Meade County Rural Electric Cooperative Corporation
16 ("Meade County"), and Jackson Purchase Energy Corporation ("JPEC"). The
17 Members in turn provide retail electric service to approximately 107,000
18 consumer/members located in 22 Western Kentucky Counties: Ballard, Breckenridge,
19 Caldwell, Carlisle, Crittenden, Daviess, Graves, Grayson, Hancock, Hardin,
20 Henderson, Hopkins, Livingston, Lyon, Marshall, McCracken, McLean, Meade,
21 Muhlenberg, Ohio, Union and Webster.

22
23
24 Big Rivers and its Members have each filed separate responses for the Commission's
25 consideration. However, given the policy-oriented nature of some of the data requests,
26 Big Rivers and its Members have coordinated their responses to several of the data
27 requests, and have often relied on the same or similar information in their responses.
28

29
30 Before responding directly to the information requests attached to the Commission's
31 Order, Kenergy, along with Big Rivers and its other Members, want to take this
32 opportunity to provide these additional comments and observations to the Commission
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KENERGY CORP'S
RESPONSE TO THE INITIAL DATA REQUESTS CONTAINED IN APPENDIX C
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DATED FEBRUARY 24, 2006

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4 in order for the Commission to fully understand the perspective of Big Rivers and its
5 Members with regard to the issues raised in this proceeding. Kenergy requests that the
6 Commission carefully consider these comments and observations as it makes its
7 findings with respect to the Smart Metering and Interconnection Service standards.
8

9
10 As the Commission is well aware, costs for electricity in Kentucky are among the
11 lowest in the country. Currently, in states that have recently pursued a course of
12 deregulation, significant increases in electricity rates are expected this spring and
13 summer. For instance, in the mid-Atlantic states of Delaware and Maryland and
14 including the Washington, D.C. area, electric rates are projected to increase from 30
15 percent to over 100 percent for certain rate classes. Obviously, in these regions of the
16 country there is a keen interest in any measures that help to control energy costs
17 including time-of-use rates and smart metering. However, in a low cost state such as
18 Kentucky there is not much customer interest in these options. In fact, Big Rivers and
19 its Members have regularly surveyed their commercial and industrial customers about
20 their interest in a rate discount for off-peak usage only to find that there is some
21 customer interest. However, little or no interest has been demonstrated when time-of-
22 use rates have been offered as discussed in the Members' responses to Smart Metering
23 1.
24

25
26 Not only is there little customer interest, but Big Rivers costs do not vary by time of
27 day. Currently, Big Rivers takes most of its power under a wholesale contract with
28 LG&E Energy Marketing ("LEM") and SEPA. The contract with LEM has a flat
29 energy charge regardless of the time the power is taken. The contract with SEPA has a
30 flat capacity charge regardless of the time the power is taken. Similarly, Big Rivers'
31 wholesale contracts with its Members do not time differentiate costs. Thus, there is
32 little incentive for Big Rivers or its Members to encourage load shifting behavior
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DATED FEBRUARY 24, 2006

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4 through time-of-use rates.

5
6 Another deterrent to the development of time-of-use rates is the fact that Big Rivers
7 and its Members are member-owned cooperatives. As non-profit, member-owned
8 enterprises, Big Rivers and its Members must have some assurance of being able to
9 recover the costs associated with new and experimental programs. Given the lack of
10 customer interest, the non-time-differentiated costs for power and the uncertainty of
11 recovery of program costs, Big Rivers and its Members have not aggressively pursued
12 time-based rate schedules and Smart Metering programs. As a consequence, Big
13 Rivers and its Members have limited experience with the programs under consideration
14 in this proceeding and therefore they can provide only limited information on the cost
15 to purchase and operate the required equipment or the likely customer response to the
16 programs.
17

18
19 With regard to the Smart Metering standard, Big Rivers and its Members have another
20 concern that may not be universally shared by all of the utilities in Kentucky. As the
21 Commission knows, a Smart Metering program requires a communications feedback
22 loop to the customers to provide them current usage and cost information. However,
23 the territory served by Big Rivers and its Members is a rural, sparsely populated area
24 where the available communication systems may not be as robust as in the more urban
25 areas of the state, and not as capable of supporting these communications. Big Rivers
26 and its Members believe this distinction should be kept in mind as the Commission
27 proceeds with its consideration and determination regarding the Smart Metering
28 standard.
29

30
31 In conclusion, Kenergy, as well as Big Rivers and the other Big Rivers' Members
32 believe that the information presented above and in their responses to the information
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requests will lead the Commission in its considerations and determinations to the conclusion that a utility-specific approach, especially with respect to implementation of these standards, is warranted. That is, any determinations that the Commission makes with regard to Smart Metering and Interconnection Service should not be universally imposed on all utilities in the state but should carefully consider the specific circumstances encountered by each utility.

Witness: Steve Thompson, John Newland and David Hamilton

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Item 1) Provide a list of programs you offer at present or have offered at any time since the enactment of the Public Utilities and Regulatory Policies Act ("PURPA") that can be included under the definition of either time-based metering or demand response set forth in Section 1252 of EAct 2005. Include a brief description of each program, the relevant tariffs (if applicable) and a cite to the Commission case number in which the program was approved (if applicable).

Response) At the present time, Kenergy does not offer either time-based metering or a demand response tariff. Kenergy previously offered an off-peak rider for industrial accounts and a pilot electric thermal storage tariff for residential customers. (See the attached tariffs). These rates were subsequently terminated due to a lack of interest from its member-customers.

Witness: Steve Thompson, John Newland and David Hamilton

HENDERSON UNION ELECTRIC
COOPERATIVE CORPORATION

PUBLIC SERVICE COMMISSION
OF KENTUCKY
EFFECTIVE

JUL 18 1998

PURSUANT TO ROP KAH 5011,
SECTION 9(1)
BY: Stephen C. Bell
SECRETARY OF THE COMMISSION

For All Territory Served
Community, Town or City

P.S.C. 7

Fifth Revised SHEET NO. 13.1

CANCELING P.S.C. 7

Fourth Revised SHEET NO. 13.1

CLASSIFICATION OF SERVICE

SCHEDULE "LP-3 OFF-PEAK" Rate Rider - LARGE POWER (501 to 2000 KW)
Non-dedicated Delivery

AVAILABILITY

This rate shall apply for large power consumers contracting for a demand of 501 to 2000 KW.

CONDITIONS OF SERVICE

- (1) An "Agreement for Purchase of Power" for a period of one year shall be signed by the consumer for service under this rate. The agreement will be automatically renewable on its anniversary date.
- (2) The LP-3 0P rider may be terminated by either the Cooperative or by the consumer with a thirty-day written notice.

CHARACTER OF SERVICE

Service shall be the 60 Hz, 3-phase, at voltage as mutually agreed by the seller and consumer.

DETERMINATION OF BILLING DEMAND

For all delivery points, the Billing Demand in kilowatts shall be the highest of: a.) The Member's maximum integrated fifteen-minute demand at such delivery point during each billing month, determined by meters which record at the end of each fifteen-minute period the integrated kilowatt demand during the preceding fifteen minutes; b.) the Contract Demand; or c.) 500 KW.

DATE OF ISSUE August 24, 1998 DATE EFFECTIVE July 18, 1998

ISSUED BY *J. Bennett* TITLE President & CEO
Name of Officer

Issued by authority of an Order of the Public Service Commission of Kentucky in Case No. 97-220

HENDERSON UNION ELECTRIC COOPERATIVE CORPORATION

PUBLIC SERVICE COMMISSION
OF KENTUCKY
EFFECTIVE

JUL 18 1998

PURSUANT TO 807 KAR 5.011,
SECTION 9 (1)
BY: Stacy O. Hill
SECRETARY OF THE COMMISSION

For All Territory Served
Community, Town or City

P.S.C. 7

Fifth Revised SHEET NO. 13.2

CANCELING P.S.C. 7

Fourth Revised SHEET NO. 13.2

CLASSIFICATION OF SERVICE

SCHEDULE "LP-3 OFF PEAK RATE RIDER" - LARGE POWER (501 to 2000 KW)
Non-dedicated Delivery

The Billing Demand as modified by this rider shall be the greater of the applicable percentages as listed below.

- 60% of any demand set between 8:00 a.m. & 5:00 p.m.
- 110% of any demand set between 5:00 p.m. & 10:00 p.m.
- 20% of any demand set between 10:00 p.m. & 5:00 a.m.
- 110% of any demand set between 5:00 a.m. & 8:00 a.m.

POWER FACTOR ADJUSTMENT

The consumer agrees to maintain unity power factor as nearly as practicable. Demand charge will be adjusted for average power factor lower than 90%. Such adjustment will be made by increasing demand 1.0% for each 1.0% by which the average power factor is less than 90% leading or lagging.

MINIMUM DEMAND CHARGE

The minimum monthly demand charge shall be no less than the amount as specified in the "Agreement for Purchase of Power."

MONTHLY RATE

Customer charge per delivery point	\$100.00 (I)
Demand Charge:	
First 500 kW of Billing Demand, per KW	8.75 (R)
Over 500 kW of Billing Demand, per KW	7.80 (R)

DATE OF ISSUE August 24, 1998 DATE EFFECTIVE July 18, 1998

ISSUED BY John West TITLE President & CEO
Name of Officer

Issued by authority of an Order of the Public Service Commission of Kentucky in Case No. 97-220

GREEN RIVER ELECTRIC CORPORATION
OWENSBORO, KENTUCKY

FOR ALL TERRITORY SERVED
Community, Town or City
PSC KY. NO. 6

Fifth Revised SHEET NO. 31A

CANCELLING PSC NO. 6

Fourth Revised SHEET NO. 31A

CLASSIFICATION OF SERVICE		RATE PER UNIT
Residential Service (Single Phase and Three Phase) Marketing Rate for Electric Thermal Storage		
<u>APPLICABLE</u> Service area in Daviess, Hancock, Hopkins, McLean, Henderson, Ohio, Webster, Breckinridge and Muhlenburg counties.		
<u>AVAILABILITY OF SERVICE</u> (T) To any customer within the service area a special marketing rate equal to 60% of the Single-Phase rate. The marketing rate requires separate metering and the execution of a contract between the customer and the corporation. A sample contract is included following this tariff on Sheet No. 31B and C.		
<u>MONTHS</u> October through April	<u>OFF-PEAK HOURS - CDT</u> 12:00 Noon to 5:00 P.M. 9:00 P.M. to 6:00 A.M.	
May through September	10:00 P.M. to 10:00 A.M.	
<u>MONTHLY RATE</u> (T) (R) ETS Usage, Energy Charge per KWH		3.3644¢
<u>TAXES</u> There shall be added to each applicable customer's bill the Utility Gross Receipts License Tax for schools (KRS 160.617) and the Kentucky Sales Tax (KRS 139.210).		
PUBLIC SERVICE COMMISSION OF KENTUCKY EFFECTIVE JUL 18 1998 PURSUANT TO 807 KAR 5.011, SECTION 9 (1) BY: <u>Stewart</u> <u>Buy</u> SECRETARY OF THE COMMISSION		

DATE OF ISSUE August 24, 1998

DATE EFFECTIVE April 30, 1998

ISSUED BY Dean Stanley
NAME OF OFFICER

TITLE President and CEO

ISSUED BY AUTHORITY OF PSC ORDER NO. 97-219

KENERGY CORP'S
RESPONSE TO THE INITIAL DATA REQUESTS CONTAINED IN APPENDIX C
TO THE PUBLIC SERVICE COMMISSION'S ORDER
DATED FEBRUARY 24, 2006

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4 **Item 2)** Provide a general discussion of the types of time-based metering or
5 demand response programs that are possible using existing technologies and a specific
6 discussion on which of these programs, if any, are feasible for current implementation
7 in Kentucky.

8
9 **Response)** As discussed in the prefatory comments, Kenergy has limited
10 information readily available on the existing technologies and the programs that are
11 feasible for current implementation in Kentucky. The most relevant cost information
12 Big Rivers and its Members can presently provide for the Commission's consideration
13 of the Smart Metering standard is the current metering system that Meade County is
14 installing.

15
16 Meade County is presently in the process of installing Hunt Technologies TS2
17 Automated Metering Interface (AMI) system. Currently the system has been installed
18 on 6 of Meade County's 16 substations. The system includes 25,668 meters. The cost
19 estimate for total implementation is \$2.8 million with an annual operating cost of
20 approximately \$46,000. To make the system compatible with time-of-use rates
21 additional investment would be required. One of the primary benefits that Meade
22 County will derive from the system is the ability to automate its meter reading
23 program. At this time, Meade County is committed to the installation of this system
24 and has indicated that it would be cost prohibitive to switch this system out to install a
25 different or an enhanced system in order to implement a more sophisticated Smart
26 Metering program.
27

28
29 **Witness: Steve Thompson, John Newland and David Hamilton**
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KENERGY CORP'S
RESPONSE TO THE INITIAL DATA REQUESTS CONTAINED IN APPENDIX C
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DATED FEBRUARY 24, 2006

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4 **Item 3)** Provide, in narrative form, with all relevant calculations, workpapers
5 and assumptions included, what you see as the potential impact of implementing the
6 Smart Metering standard included in Section 1252 of EAct in Kentucky. At a
7 minimum, the response should address the costs of implementation, financial impact on
8 the utility, who should bear the costs of implementation, and possible rate making and
9 rate treatment issues.

10
11 **Response)** As discussed in the prefatory comments, Big Rivers and its Members
12 have limited information readily available on the existing technologies and the
13 programs that are feasible for current implementation in Kentucky. However, based on
14 the Meade County experience discussed in the previous response, the investment cost
15 of the metering system is approximately \$109 per meter with an annual operating cost
16 of nearly \$2 per meter. As discussed in the previous response, this level of investment
17 while significant is still not adequate to implement a time-of-use pricing scheme much
18 less a Smart Metering program. Recently, the Ontario Energy Board released its Smart
19 Meter Implementation Plan. In the plan at page 28, it estimates the smart metering
20 cost for a new single-phase residential meter and communication system at
21 approximately \$250 per installed meter. The Ontario Board's Smart Meter
22 Implementation Plan is available at its website www.oeb.gov.on.ca. Big Rivers and its
23 Members do not have information specific to Big Rivers and its Members readily
24 available to provide reliable estimates of how much it would cost to implement a
25 system that would accommodate critical peak pricing or real-time pricing as suggested
26 by the EAct 2005. Clearly though the financial impact on Kenergy would be
27 substantial and as a cooperative would necessitate a regulatory mechanism for the
28 timely recovery of these costs.
29

30
31 With regard to who should bear the cost of implementation of a Smart Metering
32 program, the answer depends on the benefits that would actually accrue. For instance,
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if there is limited penetration of the program and as a result only a few customers realize some savings on their bills, then the cost should be borne by those customers. However, if there is a more widespread penetration and it becomes possible to identify not only some cost savings but also improved system efficiency and reliability, then it becomes more reasonable to spread the costs to implement the program among a larger group of customers, say a rate class of customers, or some subset of customers, or even across all customers.

At this time, Kenergy cannot offer additional guidance to the Commission with regard to its consideration and determination of the Smart Metering standard other than to suggest the possibility of a pilot or trial program to develop better estimates of costs, to better understand customer responses' and to determine the extent of the benefits. If after careful consideration the Commission determines that it is appropriate to implement the Smart Metering standard in Kentucky, then Big Rivers and its Members strongly recommend that they be permitted to develop and conduct a pilot or trial program prior to implementing a more broadly based program.

Witness: Steve Thompson, John Newland and David Hamilton

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Item 4) Provide a general discussion of what you perceive to be the pros and cons of implementing a Smart Metering standard in Kentucky and the policy issues that you believe the Smart Metering standard presents for the Commission.

Response)

PROS

- A Smart Metering system will likely support an automated meter reading program resulting in some operational cost savings.
- A Smart Metering system that makes electricity cost and usage information readily available to the customer may improve the level of customer satisfaction of those who utilize the information.
- A Smart Metering system will likely reduce the potential for energy theft with an immediate benefit to the utility until its next rate case and then a benefit to customers going forward.
- If customers respond to the information and price signals communicated through a Smart Metering program, there may be a reduced need and or delay for additional generating capacity as well as generation and environmental costs.
- If customers respond to the information communicated through a Smart Metering program, there may be improved system efficiency and reliability.
- Once the meters have been installed, the accuracy of meter readings should improve with the instances of estimated bills decreasing.
- Once the meters have been installed, the utility can more easily verify if and when service is restored after an outage.
- If the installed Smart Metering system is based on a real-time two-way communication (i.e. data is transferred to and from the meter by the utility), then more enhanced services such as customer display, integration with load

KENERGY CORP'S
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DATED FEBRUARY 24, 2006

control systems, interface to smart thermostats, voltage monitoring, and remote cut-off can be provided for incremental costs.

CONS

- The cost to implement an effective Smart Metering program will be substantial and if there are not concomitant cost reductions and system benefits then the utility, and ultimately its customers, will incur a significant financial hardship.
- If the existing metering systems have to be replaced prematurely, there will be undepreciated book value of retired equipment that must be accounted for.
- There must be some assurance that the current and future communications infrastructure will support the Smart Metering program now and in the future.
- If there are additional changes to Daylight Savings Time in the future, it will result in unanticipated reprogramming costs for a Smart Metering program.

The regulatory challenge that the Commission has before it is to consider and make an affirmative determination that the benefits of implementing a Smart Metering program clearly outweigh the costs. Kenergy would like to reiterate its concern that given the limited information about the cost, operation and customer response to a Smart Metering program the Commission should not determine that the statewide implementation of a Smart Metering program is required or that it should be implemented immediately by all utilities. Big Rivers and its Members believe that if the Commission determines that a Smart Metering program should be adopted, then a more reasonable approach to implementation for Big Rivers and its Members is to pursue a pilot or trial program first. This will allow for a realistic assessment of costs and benefits to be developed to determine an optimal strategy for implementation of a Smart Metering program on the Big Rivers system.

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Another regulatory policy issue that confronts the Commission is the recovery of costs for implementing a Smart Metering program. An integral part of a Smart Metering program – pilot or otherwise – should be a regulatory mechanism for the equitable recovery of associated costs. A cost recovery mechanism similar to that used for demand-side management programs may be appropriate.

Witness: Steve Thompson, John Newland and David Hamilton

KENERGY CORP'S
RESPONSE TO THE INITIAL DATA REQUESTS CONTAINED IN APPENDIX C
TO THE PUBLIC SERVICE COMMISSION'S ORDER
DATED FEBRUARY 24, 2006

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4 **Item 1)** Provide, in narrative form, with all relevant calculations, workpapers
5 and assumptions included, what you see as the potential impact of implementing the
6 Interconnection standard included in Section 1254 of EAct in Kentucky. At a
7 minimum, the response should address the costs of implementation, financial impact on
8 the utility, who should bear the costs of implementation, and possible rate making and
9 rate treatment issues.

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11 **Response)** Kenergy is a distribution cooperative which receives wholesale power
12 from Big Rivers. Big Rivers is a G&T, cooperatively owned by Kenergy and Big
13 Rivers' other two member distribution cooperatives, which are, in turn owned by their
14 retail member customers. The member distribution cooperatives own and operate the
15 electrical distribution systems to which their retail member customers are connected,
16 and from which they take retail electrical service. Big Rivers owns and operates the
17 electrical transmission system to which its member distribution cooperatives are
18 connected and over which they receive their wholesale electricity purchases.

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21 Electric cooperatives differ from investor-owned electric utilities in that electric
22 cooperatives are not-for-profit, member consumer owned utilities that have no
23 shareholders to absorb the cost of new programs. For this reason, the total costs from
24 any implementation of the EAct 2005 in Kentucky which would affect Big Rivers or
25 its Members should be borne by the distributed resource ("DR"), who also stands to
26 benefit if any profits are realized. No DR project should be subsidized by non-
27 participating members, either directly or indirectly through costs incurred by the
28 member owned electric cooperative. To insure against subsidization, the DR should
29 bear all costs of interconnection, including all initial implementation cost, the utility's
30 administrative cost of billing and inspection, and the initial and ongoing cost of testing
31 and maintaining the protection systems described in the IEEE 1547 standard.
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4 One cost impact of the possible implementation of the EAct 2005, and one that rural
5 electric cooperatives are especially sensitive to given that their customers are spread
6 out over a large area, is the cost of upgrading distribution lines. An electric
7 distribution line that is sized sufficiently to serve a sparsely populated area would have
8 no incremental capacity to handle a proposed DR without costly upgrades. Any
9 regulation proposed to implement the EAct in Kentucky should require that an
10 engineering study be performed at the expense of the DR to determine the adequacy of
11 the distribution line to handle the proposed generation. If there is generation net of the
12 local load that will be absorbed into the distribution system, and the host distribution
13 line is not sized to safely handle the generation, then all system improvements required
14 to handle the generation should be the expense of the DR, and the cost of these system
15 improvements should be assured before the interconnection is allowed.
16

17
18 Because Big Rivers' member cooperatives' wholesale electric requirements are largely
19 supplied under all requirements wholesale contracts with Big Rivers, if the EAct is
20 implemented by Kentucky, all sales of generation should be between the DR and Big
21 Rivers to maintain the integrity of those contracts. Power that enters the distribution
22 grid should be netted out of the wholesale meter that measures the wholesale
23 consumption of the host member cooperative, and the generation received into the
24 distribution grid should be purchased from the DR by Big Rivers at Big Rivers'
25 avoided cost of generation. Big Rivers' avoided cost of generation should be defined
26 as its variable operational and maintenance cost. At such time that Big Rivers is in
27 need of additional generation, the avoided cost would also include the cost of the new
28 generation.
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32 **Witness: Steve Thompson, John Newland and David Hamilton**
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4 **Item 2)** Provide a general discussion of what you perceive to be the pros and
5 cons of implementing an Interconnection standard in Kentucky and the policy issues
6 that you believe the Interconnection standard presents for the Commission. Include
7 discussion of the issues that must be addressed to comply with IEEE 1547.

8
9 **Response)** As noted above, as a member-owned and member-driven electric utility,
10 Kenergy weighs the impacts of the EAct 2005 interconnection standard based upon
11 the best interests of its member-owner retail consumers. Even without implementation
12 of the EAct 2005, Big Rivers and Kenergy are willing to assist any retail member
13 consumer with the ability to utilize available resources to its betterment through electric
14 generation. However, they must ensure that such generation does not place a burden
15 on the retail member's neighboring member consumers, or place the consumer or its
16 neighbors, or the transmission and distribution systems on which they rely, in an
17 unsafe situation. Such generation must also be cost effective and environmentally
18 friendly, and any DR interconnection must be implemented in a way that protects the
19 safety of the member consumer, its neighbors, and utility workers, and that protects the
20 service quality and reliability of Big Rivers and its Members' systems.

21
22
23 While Big Rivers and Kenergy will assist DRs that meet the above criteria, they have
24 compared the pros and cons of implementing the EAct 2005 interconnection standard
25 in Kentucky and have found that the cons far outweigh the pros. More specifically,
26 Big Rivers and Kenergy believe that forced implementation of the EAct
27 interconnection or any similar standard will be at the expense of safety and electric
28 service quality to those in proximity to a DR.

29
30 Safety and reliability are significant concerns with the possible implementation of the
31 EAct 2005. The IEEE 1547 standard recognizes that electric power systems were not
32 designed to accommodate active generation and storage at the distribution level, and it
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4 attempts to develop technical requirements for DR interconnection that address safety,
5 performance, operation, testing, and maintenance considerations. The standard
6 describes systems that a DR must have in place and in good working order to assure
7 the quality of the generation, its safe and timely shut down during times of distribution
8 line faults, and the timely disconnection of the DR from the distribution system during
9 faults on the DR system. These systems are essential for the reliability and quality of
10 service of the distribution grid, and for the safety of the electric utility workers during
11 times of distribution line faults. Therefore, any implementation of the EPCRA 2005
12 must effectively require compliance with the IEEE 1547 standard to ensure not only
13 that the described protection and monitoring systems will be installed, but also that
14 those systems will be routinely inspected and maintained.
15

16
17 However, even with the IEEE 1547 standard, safety would still be a concern. Electric
18 utilities specialize in the generation and delivery of electricity, and devote a tremendous
19 amount of time and expense to training their electrical workers to work safely in the
20 generation and delivery of electricity. In spite of the utilities' best efforts, however,
21 some electrical accidents still occur. Given that the primary function of many DRs will
22 not be the generation and delivery of electricity, there is a substantial concern that
23 adequate attention will not be given to electrical safety and safety training, increasing
24 the likelihood of electrical accidents.
25

26
27 Additionally, the IEEE 1547 standard is not comprehensive. It does not, for example,
28 state the maximum capacity of DR generation that can be interconnected to any
29 particular distribution system, it does not apply to interconnections to network systems,
30 and it only provides general statements as to the necessary performance of DR
31 generation and protective equipment, meaning additional tests or standards may be
32 required to ensure safety and reliability. The IEEE 1547 standard also does not
33 address the methods used for performing electric utility impact studies of DR or

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4 associated tariff issues, which are additional issues that must be addressed with any
5 possible implementation of the EAct 2005.
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7 Moreover, electric utilities have state and federal regulatory agencies to prescribe
8 safety and reliability standards and to ensure that proper attention is given to safety and
9 maintenance needs. However, even with those safeguards in place, large transmission
10 outage investigations often reveal that maintenance has been underperformed. The
11 price that a DR would realize from its generation (i.e., the avoided cost to the
12 interconnected utility) will be very small. This is especially true in this state since
13 Kentucky is one of the lowest cost electric power producers in the country. With the
14 cost pressure of a low avoided cost, DR's will be under great pressure to cut costs
15 where possible and will be greatly tempted to under emphasize their safety and
16 maintenance needs at the expense of safety and distribution grid reliability or quality of
17 service.
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20 **Witness: Steve Thompson, John Newland and David Hamilton**
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Item 3) Identify any customer with on-site generation that is currently connected to your distribution system. Provide the customer's maximum demand in 2005 and current generating capacity.

Response) Weyerhaeuser, a retail customer of Kenergy, has on-site generation capability, however, the facilities are interconnected to Big Rivers' 161 kv transmission system and not the Kenergy distribution system. Kenergy has no other customers with on-site generation that are interconnected to its distribution system.

Witness: Steve Thompson, John Newland and David Hamilton